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United States Patent [19]

Moody

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[54] VARIABLE-SPEED ROTATING DRIVE

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[73] Assignee: The United States of America as represented by the Secretary of the Navy, Washington, D.C.

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[58] Field of Search 91/519; 92/31, 92/71, 136, 147

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[57] ABSTRACT

A variable-speed rotating drive is provided. A drive shaft terminates in a threaded piston that is received in an internally threaded cylinder. A plurality of linear actuators are distributed evenly about the circumferential periphery of the internally threaded cylinder. The drive shaft is mechanically coupled with each shaft of the linear actuators so that axial movement of the linear actuators' pistons causes the threaded piston to move axially in the internally threaded cylinder. This brings about axial rotation of the internally threaded cylinder. An actuating source is coupled to the linear actuators to cause the axial movement of selected ones of the pistons based upon the desired speed of rotation of the internally threaded cylinder.

15 Claims, 4 Drawing Sheets

